DIFFICULT WEATHER HAMPERS RETURN FROM COAST; SCIENTIFIC PROJECTS FORGE AHEAD

Antarctic weather conditions: always a wild card

BELARE expedition leader Alain Hubert and the IPF team that accompanied him to the coast spent several days unloading the cargo ship, which dropped off a large amount of supplies and equipment for the station.

On Sunday, they finished unloading the cargo from the ship with ideal weather conditions. Only a few hours later a storm arrived and whiteout conditions hit the Queen Maud Land region of East Antarctica forcing the Prinoth convoy hauling the cargo back to the station to take a two-day about 128 km north of Princess Elisabeth Antarctica.

Unfortunately, bad weather in Antarctica can foil even the best laid plans. The force of nature is so strong there that it’s always safer to err on the side of caution. If you get caught in a whiteout, sometimes the best thing to do is just stay put until the storm blows over. Whiteout conditions can be extremely dangerous as

it’s often impossible to see only a few metres ahead. It’s easy to get confused when navigating through a whiteout, especially if you get tired so it was the right decision to stop and wait it out.

When the weather cleared, the convoy continued on Wednesday to Perseus Airfield, and then made it to PEA on Thursday where the unloading of all the goods and material could take place.

Progress on the ice shelf

Meanwhile, Professor Eric Rignot and his team from UC Irvine are still at the coast with IPF Guide Daniel Mercier. They’ve made progress on their work studying how the King Baudoin Ice Shelf from its to the grounding line (where the ice shelf starts to float on the water, past the continent’s bedrock) might be being affected by a warming ocean and changing climatic conditions. They’ve managed to set up a second AWS near the edge of the ice shelf, take numerous radar transects, and drill boreholes through the ice sheet to measure ice thickness, temperature and salinity of the water beneath the ice sheet.

Along with the radar transects and the hot water drilling activities, the team is also studying the properties of the ice with a seismic device and performing measurements of conductivity, temperature and depth (with a CTD instrument) at several locations along the ice edge of the King Baudouin Ice Shelf.

With another week to go, they still have quite a lot of work left to do. But despite the setback, they’ll continue their mission until completion.

Meanwhile back at the station

The storm has piled several metres of snow against the doors and walls of the station, which will need to be cleared away once the weather improves. The entrances to the garages where the vehicles are kept have been snowed in. The team has only been able to get out of the red front door of the building for the past few days, and only after regularly shovelling away snow that has accumulated in front of it.

Now that the storm has passed and the traverse team is back from the coast with the Prinoth tractors, the entire team is now busy, unloading the cargo from the sledges and containers. Door by door the snow is being cleared away from the station so operations can get back to normal.

Ghent University researcher Paula Lampreapineda, who’s working on the BELSPO-sponsored PASPARTOUT project, has been installing a new and improved version of the volatile organic compound autosampler that can resist freezing temperatures better on the south shelter of PEA to collect samples of atmospheric particles over the coming year. The snow samples she took from trenches she dug at the coast last week are currently on the cargo ship that has left along with samples from the FROID and ULTIMO projects.

Björn Tytgat and Quentin Vanhellemont from Ghent University and the RBINS respectively, who are working on the BELSPO-funded EXPOSOILS project, have completed their first round of day trips from PEA to ten locations where they’ve been collecting data loggers and invertebrates samples from rock beds and open-top chambers that have been set up in the vicinity of PEA for several years now. With the weather set to be good again starting last Wednesday they may return to a few more sites to try to collect more of the microfauna for molecular analysis.

And Sergi Sergi Gonzalez from the EPFL in Lausanne, who is working on the CRYOS project, has continued to install a series of instruments on the antenna in front of PEA at three different heights. These instruments will measure blowing snow and heat fluxes at different levels above ground.

By this time next week, all of the scientists will be packing their gear to start heading home. The next flight out is scheduled for February 14th!